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I. REJECTION OF CLAIMS 1-18, AND 22-29 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

The Examiner has again rejected claims 1-18 and 22-29 in paragraphs 4-7 of the Office Action under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the Examiner alleged that "there is no discussion in the specification of the compression of image frames producing control information indicative of buffer behavior". Additionally, the Examiner alleged that "secondly, 'indicative' does not define any real relationship between the control information and the buffer behavior". Furthermore, the Examiner alleged in Paragraph 5 of the Office Action that "applicant cites several patents that allegedly show control information indicative of buffer behavior" misses the point of the Examiner's rejection. Applicant respectfully disagrees.

First, the Examiner's attention is directed to the fact the term "buffer behavior" is specifically used in Applicant's specification. Specifically, Applicant's specification on page 11, line 33 to page 12, line 15 positively recites:

> "At step 308 the segments are compressed according to, e.g., MPEG-2 video and related audio compression techniques. Since the stream segments produced at step 306 are typically self contained with respect to <u>buffer behavior</u>, the compression processes utilized at step 308 may be performed in parallel. That is, multiple audio visual stream segments may be compressed in parallel using a parallel processing or parallel encoding technique. Otherwise, a single MPEG or other compression module may be used to process each stream segment in a standard manner to produce a compressed output stream comprising a plurality of compressed stream segments. The routine 300 then proceeds to step 310. At step 310 the compressed stream segments are re-sequenced (i.e., "shuffled") to produce a re-sequenced compressed audio video information stream and associated index table. The index table includes information relating the re-sequenced segments to the initial sequence of segments such that the re-sequenced information stream segments may be rearranged to produce the initial stream segment order. The routine 300 then proceeds to step 312". (emphasis added)

Additionally, Applicant's originally filed claim 14 positively recites:

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"14.   The method of claim 1, wherein
          <u>said step of compressing said information frames produces control
information indicative of a utilization level of a decoder buffer</u>; and
          said step of encrypting includes a step of encrypting said indicia of
decoder buffer utilization. (emphasis added)

In the specification, Applicant clearly asserted that "the segments are
compressed according to, e.g., MPEG-2 video and related audio compression
techniques". Examples of MPEG compression techniques that compress image frames
in accordance with control information indicative of buffer behavior can be found in US
patents 6,243,497, 6,160,846, and 6,023,296, which are commonly assigned to the
present Assignee. The specifications of these issued patents contain information that
clearly describe control information indicative of buffer behavior. Thus, the present
specification viewed by those skilled in the art, clearly described the invention in such a
way as to enable one skilled in the art to make and/or use the invention.

Additionally, Applicant's originally filed claim 14 also clearly recited that "<u>said
step of compressing said information frames produces control information indicative of
a utilization level of a decoder buffer</u>". The Examiner's attention is directed to the well
known holding that "original claims constitute their own description". See *In re Koller*,
613 F.2d 819 and MPEP 2163.03 I. Thus, Applicant respectfully submits that claims 1-
18 and 22-29 fully satisfy the requirement under 35 U.S.C. 112, first paragraph in view
of Applicant's specification.

Second, Applicant again disagrees with the Examiner's assertion that the term
"'indicative' does not define any real relationship between the control information and
the buffer behavior". The term "indicative" indicates that the control information carries
or reflects information that provides insight into the buffer behavior", e.g., buffer fullness
or lack of buffer fullness and the like. The term "indicative" has a well known
interpretation, especially in the field of Patent Law. To illustrate, a cursory search on
the USPTO database produced 12 issued patents assigned to the present Assignee
where the term "indicative" is used in the claims. Another search also revealed that
over <u>22,500</u> issued patents contain the term "indicative" in the claims. Such prevalent
use of this term in issued patents clearly indicated the acceptance of this term as

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proper and clear claim language.

Applicant respectfully declines to accept the Examiner's invitation to replace the term "indicative" with a stronger word, since such replacement is not necessary. More importantly, the Examiner has provided no suggestion as to what stronger word the Examiner had in mind.

Finally, Applicant directs the Examiner's attention that while he maintains a 35 U.S.C. 112, first paragraph rejection against Applicant's recitation of "compressing said information frames produces control information indicative of a utilization level of a decoder buffer" as failing to enable one skilled in the art to practice the invention, but then he immediately takes an opposite position by taking official notice that "[o]fficial notice is taken that it is old and well known that MPEG produces control information indicative of buffer behavior in the decompression step". The Examiner cannot take both positions by stating that on the one hand, no one skilled in the art can practice the invention, and then on the other hand, it is simply general knowledge. Applicant respectfully requests that the present 35 U.S.C. 112, first paragraph rejection be withdrawn.

II. REJECTION OF CLAIMS 1-5, 7-15, 17-18 AND 22-29 UNDER 35 U.S.C. § 103

The Examiner has again rejected claims 1-5, 7-15, 17-18 and 22-29 in Paragraphs 9-16 as being unpatentable over the Walker patent (United States Patent No. 5,014,310 issued May 7, 1991) in view of Inoue patent (United States Patent No. 5,195,134, issued March 16, 1993). In essence, the Examiner reiterated his previous 103 rejections as stated in the Final Office Action dated November 20, 2000, while taking official notice that "[o]fficial notice is taken that it is old and well known that MPEG produces control information indicative of buffer behavior in the decompression step". The Applicant respectfully disagrees.

The Walker patent discloses a method and apparatus of rearranging adjacent lines of a baseband, NTSC, video signal such that chrominance and luminance features of the video signal are maintained. That is, the Walker patent addresses the problem of chrominance leakage of a 3.58 Mhz local color sub-carrier reference signal into the

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chrominance information of the video lines applied to a descrambled video line.

The Inoue patent discloses an apparatus for transmitting a scrambled video and audio signal via a satellite wherein the audio portion of the signal contains channel, start/end time and standard time information of programs. A video tape recorder can record programs based on the information contained in the audio portion of the signal.

The Walker patent and Inoue patent, either singly or in any permissible combination, fail to disclose or suggest the invention of claim 1 as follows:

"A method for securing an information stream comprising a sequence of image frames, said method comprising the steps of:
segmenting said information stream into a plurality of information stream segments having a first segment sequence, each of said information stream segments comprising a plurality of image frames;
compressing said image frames forming said information stream segments, where said step of compressing said image frames produces control information indicative of buffer behavior;
re-sequencing said information stream segments to produce a re-sequenced information stream having a second segment sequence, said first segment sequence being related to said second segment sequence by an index; and
encrypting said re-sequenced information stream and said index. "
(emphasis added).

In contrast to the above-quoted claim language, both the Walker and Inoue arrangements fail to disclose or even remotely suggest a process of "compressing said image frames forming said information stream segments". Rather, as referenced by the Examiner's comment, the Walker arrangement discloses compressing and scrambling a digital audio signal. Specifically, Walker discloses, "The compressed and scrambled digital audio signal is further processed for error detection and correction" (column 7, lines 59-61). There is no disclosure or suggestion in Walker to "compress image frames". More specifically, the Walker arrangement rearranges video lines without the step of compressing the video lines.

Furthermore, the Inoue arrangement also does not disclose or suggest "compressing image frames". In contrast to Applicants' invention, Inoue discloses, that "[t]he video signal which is transmitted from the video, audio, and digital audio signal transmission device to the scramblers is of NTSC format, and scrambled by line

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shuffling, using frame memory" (column 4 lines 7-11). The Inoue arrangement simply rearranges video lines without the step of compressing the video lines.

Additionally, it is noted that both the Walker arrangement and the Inoue arrangement make no mention of buffer behavior. Rather, the Walker and Inoue arrangements operate on "video lines" and not on an "information stream" as in the Applicants' invention. Thus, buffer behavior is irrelevant to the prior art arrangements.

The Examiner argues that "buffer utilization" equates to "access rights" for decompression. The Applicant disagrees. The "buffer utilization level" feature of the invention is not equivalent to access rights for decompressing an information stream. Access rights allow the receiving end to decode and decompress a signal. By contrast, the "buffer utilization level" is determined by, for example, modeling, at an encoder, the behavior of a buffer at a decoder. This is entirely different from the prior art arrangements.

In fact, the Examiner's simple assertion that the MPEG standard teaches such use of the buffer would not bridge the substantial gap left by Walker and Inoue. For example, Inoue's invention operates in the NTSC format (an analog format), whereas the MPEG format is a digital format. These two references are fundamentally opposite. Thus, there is absolutely no motivation or suggestion to combine MPEG teachings with Inoue. Finally, Applicant affirmatively requests that the Examiner provides specific support for the assertion that "[o]fficial notice is taken that it is old and well known that MPEG produces control information indicative of buffer behavior in the decompression step".

Since the references, either singly or in combination, fail to disclose or suggest the claimed invention, it is respectfully submitted that the invention of claim 1 is patentable over the cited references. Moreover, since independent claims 23 and 24 include limitations similar to those found in independent claim 1, it is submitted that claims 23 and 24 are patentable for at least the reasons discussed above with respect to claim 1. Therefore, the Applicant submits that claims 1, 23 and 24, as they now stand, fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Dependent claims 2-5, 7-15, 17-18, 22 and 25-29 depend from claim 1 or 23 and

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recite additional features therefore. As such, and for the exact same reason set forth above, the Applicant submits that none of these claims are obvious with respect to the teachings of the cited reference. Therefore, the Applicant submits that all of these dependent claims also fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Conclusion

Thus, the Applicant submits that all of these claims now fully satisfy the requirements of 35 U.S.C. §112. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

3/18/02

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